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Report No. 5083

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# Intergrating Quantitative and Ethnographic Methods to Describe the Classroom

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## Abstract

The debate between proponents of ethnographic and quantitative methodology in classroom observation is reviewed, and the respective strengths and weaknesses of the two approacnes are discussed. These methodologies are directly compared in a study which conducted simultaneous ethnographic and quantitative observations on nine classrooms. It is concluded that inferences about classroom processes are best made using quantitative methodology, but that ethnography is a very useful adjunct for purposes such as generating hypotheses and pilot testing quantitative instrumentation.

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to Describe the Classroom

## Introduction

Classroom observation has become one of the most important elements of educational research, yet currently there is much discussion concerning how classroom observation should be performed if we are to make progress in understanding the classroom. The prevailing methodology has been, and continues to be, the quantitative approach. Yet, perhaps because this quantitative approach to educational research has been slow to yield answers about the classroom, some have argued that the approach should be replaced or at least supplemented by qualitative research, also known as ethnography. Lutz and Ramsey (1974), for example, argue that the quantitative study "of separate variables within the organizational process has, in our view, tested 'ungrounded' and often meaningless hypotheses" and that "the time is long overdue for another approach in education" (p. 5). Rist (1980) relies heavily upon Thomas Kuhn's conception of the progress of science in arguing that "every research paradigm has its parameters" (p. 8). He claims that the basic theoretical development of the quantitative approach has come to an end and that the task now is "to break out of the conceptual cul-de-sac of quantitative methods" (p. 8).

Proponents of qualitative methodology claim that their approach represents the sort of conceptual breakthrough needed for further progress. Qualitative research in education involves non-participant observation in which the researcher directly observes the classroom, often recording events and impressions in narrative form. Using this method, the researcher attempts to understand situations from the perspective of the participants

in the situation (Filstead, 1979). Observation is begun with no theory in mind; the ethnographer's initial goal is solely to collect data. But as data are collected, "working hypotheses" evolve, "generated partly out of prior knowledge of the system being studied, partly from first observations, and partly due to conceptual and theoretical positions held by the researcher" (Lutz and Ramsey, 1974, p. 6). These hypotheses are "grounded" in the data, meaning that theory emerges from the data itself (Filstead, 1979). The resulting theories, hypotheses, and explanations are seen as richer and more complete than quantitatively based theories.

Filstead (1979) sees the qualitative and quantitative approaches as differing in more than just their data-gathering techniques. He sees them as representing quite different world-views or philosophies. The quantitative approach is basically an extension of the approach used in the natural sciences. "The researcher in the quantitative paradigm is concerned with discovering, verifying, or identifying causal relationships among concepts that derive from an a priori theoretical scheme" (p. 37). The quantitative paradigm "employs a lock-step model of logicodeductive reasoning from theory to propositions, concept formation, operational definition, measurement of the operational definitions, data collection, hypothesis testing, and analysis" (p. 38). Observations are translated into numbers via counting and "measuring," and statistical models are used to analyze these numbers. In its most basic sense, the quantitative approach represents a faith in reason, a belief that behavior is the result of the interaction of a finite, though perhaps very large, set of isolable and measurable variables, each of which has, in theory, its own independent effect.

In contrast, the qualitative approach represents a belief in "multiple realities" (p. 36). "Individuals are conceptualized as active agents in constructing and making sense of the realities they encounter rather than responding in a robotlike fashion" (p. 36). Events must be understood from the perspective of their participants. Because the quantitative approach strives to describe a single "objective" reality, "it has been unable to provide the context within which to 'make sense,' 'understand,' and therefore arrive at the meaning of the interactions and processes it has been examining" (p. 37).

The debate between proponents of the two approaches has been primarily on the theoretical, philosophical level described above. It has been the occasion for much rhetoric which, as Cooley, Leinhardt and McGrail (1977) point out is reminiscent of the sort of name calling that Meehl (1954) summarized more than twenty years ago in his discussion of the debate surrounding the merits of statistical versus clinical methods:

> It is customary to apply honorific adjectives to the method preferred, and to refer pejoratively to the other method. For instance, the statistical method is often called operational, communicable, verifiable, public, objective, reliable, behavioral, testable, rigorous, scientific, precise, careful, trustworthy, experimental, quantitative, down-to-earth, hardheaded, empirical, mathematical, and sound. Those who dislike the method consider it mechanical, atomistic, additive, cut and dried, artificial, unreal, arbitrary, incomplete, dead, pedantic, fractionated, trivial, forced, static, superficial, rigid, sterile, academic, oversimplified, pseudoscientific, and blind. The clinical method, on the other hand, is labeled by its proponents as dynamic, global, meaningful, holistic, subtle, sympathetic, configural, patterned, organized, rich, deep, genuine, sensitive, sophisticated, real, living, concrete, natural, true to life, and understanding. The critics of the clinical method are likely to view it as mystical, transcendent, metaphysical supermundane, vague, hazy, subjective, unscientific, unreliable, crude, private, unverifiable, qualitative, verbalistic, intuitive, and muddleheaded (p. 4).

Having listed all of these complimentary and pejorative adjectives in one paragraph, an attempt will be made to avoid them throughout the remainder of this paper. Rather, the emphasis in this paper will be on integrating qualitative and quantitative methodologies. The debate between advocates of these two approaches has emphasized their differences. Both Rist (1980) and Filstead (1979) have suggested that the two methodologies are philosophically incompatible. Filstead, for example, concludes that the differences between the two methods represent more than "just differences between research strategies and data collection procedures." "These approaches represent fundamentally different epistemological frameworks for conceptualizing the nature of knowing, social reality, and procedures for comprehending these phenomena" (p. 45). Despite these claims, both Rist and Filstead conclude their papers by calling for an integration of the two methods, or at least a "detante" (Rist, 1980).

It is the position of this paper that the two approaches share one important element; they both represent attempts to understand the world. In the view of this paper, classroom research is seen as a science in its infancy, in which there exists many more questions than answers. Observation is essential at this stage of inquiry, and much stands to be learned, relative to what is known, from almost any kind of observation. Hypotheses should be "grounded" in data, especially observational data, for where else would one reasonably form hypotheses? However, both quantitative and qualitative data can be used to generate such hypotheses.

Once hypotheses are formed, by whatever means, they are used to guide the gathering of future data. Hypotheses are seen as useful in

delimiting the scope or focus of observation, for one can never observe everything, no matter what the methodology. However, no matter how these future data are collected, the researcher should not be blind to useful data unrelated to or even contrary to the hypotheses of interest, for "there are more things in heaven and earth than are dreamt of in our hypotheses, and our observations should be open to them" (Cronbach, 1975, p. 124). If we are to learn about the classroom, we must engage in intensive observation which incorporates "an open-eyed, open-minded appreciation of the surprises nature deposits in the investigative net" (Cronbach, 1975, p. 125). From this viewpoint, much can be learned from both quantitative and qualitative observation, although each method has its own strengths and weaknesses. Unfortunately, both methods share a common pitfall, since, as Campbell (1979) points out, the "naturalistic observation of events is an intrinsically equivocal arena for causal inference, by qualitative or quantitative means, because of the ubiquitous confounding of selection and treatment" (p. 50). Since both quantitative and qualitative researchers seek to generalize from a sample of cases under study, this confounding threatens the validity of any inference one wishes to make about the classroom, no matter what the method of observation.

This emphasis on the commonalities of the two approaches represents the theoretical bias of this paper. Having made this bias explicit, we will attempt to outline some of the strengths and weaknesses of quantitative and qualitative observation of the classroom. A study will then be described in which both types of data were collected simultaneously in several classrooms. These two data sources will then be compared in order

to highlight the sorts of information each can provide. In addition, their respective "blindspots" will be discussed and suggestions will be made about improving each method so as to obtain better descriptions of the classroom.

Quantitative Methodology: Strengths and Weaknesses

Observation under the quantitative approach is usually accomplished by use of various observation systems. Many such systems have been devised (c.f., Simon and Boyer, 1970), but they may generally be divided into one of two types. The first type requires a trained observer to rate the teacher on one or more variables using a Likert-type scale. Such rating systems may be contrasted with counting systems in which the observer tallies the occurrence of relatively discrete behavioral categories. It is the latter class, counting systems, which are the focus of this discussion.

In the realm of classroom observation, counting systems are typically based on a counting unit--either a time interval (e.g., 3 seconds) or some behavioral unit (e.g., a verbal utterance or an interchange). As each unit transpires, the observer records which of a finite number of behavioral categories most adequately describes the events which occurred during that unit. At the end of an observation period, a teacher's protocol shows the frequency with which each behavioral category occurred. This frequence data may then be related to various outcome measures (such as achievement scores or student affective variables) in order to isolate teacher variables associated with positive or negative outcome.

How adequate a picture of the classroom do such frequency protocols provide? For several reasons it may be argued that in the absence of supplemental data such protocols may often be inadequate or misleading. One problem encountered with frequency protocols has to do with the low frequency with which many classroom behaviors occur. A second problem

regards the tendency of observational categories to capture the mechanics of teaching while missing other important information. The psychometric weakness and semantic ambiguity of many classroom variables may further compromise their value.

The problem of low frequency is important to anyone who wishes to use statistical methods to relate frequencies of behavior to other variables. If a particular behavioral category fails to occur in the classroom reasonably often, the distribution of frequencies across observations may suffer from extreme restriction of range, extreme skewness, or both. A previous study (Borich, Malitz and Kugle, 1978) provided normative data which made it possible to assess how serious the problem of low frequency can be. In that study, pairs of coders were trained to use five popular classroom observation systems which employed the counting method. These coders observed 36 one-hour videotapes of twelve teachers on three occasions. The number of categories on these systems ranged from 10 to 74, with a total of 139 categories in the five systems. Details of data collection and reliability are described by Borich, et al. (1978). Frequency distributions for each category were obtained across the 36 observations. A category was defined as low frequency if its median frequency was 4.00 or less, indicating that it occurred four or fewer times on at least half of the one-hour observations. Using this criterion, 96 of the 139 categories (69.1%) qualified as low frequency categories. The percentage of low frequency categories per system ranged from 40.0% to 79.2%. Using more stringent low-frequency criteria, 52.5% of the 139 categories had medians less than 1.00, and 10.1% <u>never</u> occurred in 36 hours of observation.

It is clear that if the counting systems and behavior observed are at all representative of those typically encountered in classroom research, then low frequency is indeed a major problem. This problem should be of concern to those who analyze frequency data using parametric statistics since it is well established that the resulting skewness and restriction of range attenuate statistical relationships, making it more difficult for researchers to obtain significant results.

What should be done to remedy this problem? One's initial response to this question might be to eliminate low frequency categories from counting systems. However, it is possible that in doing so, one might eliminate important classroom variables. Perhaps some behaviors, such as a teacher's empathizing with a student, occur with low frequency, but carry great impact when they do occur. Such behaviors might be termed "critical events," since they are of potentially critical importance when they occur. The prevalence of low frequency categories may indicate that many variables thought theoretically important by authors of observation systems might be best thought of as critical events since they occur so seldom. Analysis of such variables might require the use of techniques (e.g., Bishop, Fienberg and Holland, 1978) to supplement the correlational methods currently relied upon in process-product research.

A second problem with frequency protocols relates to all categories, whether they be of high or low frequency, for it is quite possible for teachers with rather different teaching styles to produce similar frequency patterns. Questioning behavior provides an excellent example of this, for most classroom observation systems measure some aspect of questioning. Consider two teachers in a small group setting. Teacher A might be a

very successful teacher who skillfully asks questions matched to her students' level of understanding. In taking her students through a lesson, this teacher will produce a high frequency of teacher questioning and of student response. In contrast, consider Teacher B who has a prepared list of questions which she is determined to complete by the end of the group lesson. She asks questions and gets responses, but mechanically proceeds through her list without attending closely to pupil responses and correcting misunderstandings. Her protocol of questioning and response rate may be similar to Teacher A's, but these frequency protocols will fail to capture the important differences in questioning behavior which might be quite apparent to even a casual observer.

Thus, even well-defined behavioral categories may not measure the crucial aspects of teaching. However, evidence suggests that many currently used categories are not well defined, either in a psychometric or a semantic sense. Borich, Malitz and Kugle (1978) found that many categories currently in use may not meet the psychometric standards necessary for meaningful measurement. In that study five classroom observation systems were examined for convergent and discriminant validity (Campbell and Fiske, 1959). It was found that about half of the categories sampled failed to demonstrate adequate validity. Furthermore, Borich, et al found that many categories are ambiguously defined by the authors of classroom observation systems.

> If a system is to be used reliably by raters, categories must be clearly operationalized for the coders. This, of course, is the purpose of training. However, it is not possible to include in a definition in a manual all of the information necessary to code a particular category reliably. Often coders find it necessary to create "ground rules" to delimit the boundaries of particular categories. Coders, for example, might have difficulty distinguishing between the categories "teacher accepts" and "teacher

> approves." To distinguish between these behaviors, they may create certain ground rules for coding. For example, coders might decide that if the teacher uses an exclamation such as "Oh!" or "My!" in regard to a student's comment, the proper code is "teacher approves"; otherwise, the code is "teacher accepts." From our experience in this study, ground rules like this are not uncommon, and while they do not seem to distort the meaning of the categories, they delimit their meaning in a way that might not be apparent to a reader of the manual (p. 126-127).

This discussion has suggested that classroom observation variables may lack validity, may not measure what they appear to measure, or may measure rather meaningless, mechanistic aspects of teaching. Furthermore, some very important classroom events may occur so infrequently that they cannot be analyzed using parametric, regression-based statistics. These weaknesses may have hindered classroom research and some have drawn criticism from proponents of the qualitative approach. As these critics charge, some quantitative variables are sterile, meaningless, or artificial. However, it is difficult to believe that this is true of <u>all</u> classroom variables. It is also true that no behavioral measurement can be made without error. But this is tacitly admitted in the quantitative tradition by psychometric theory with its concepts of reliability, validity and generalizability which have been developed for the specific purpose of assessing the adequacy of our measurements. Thus, methods and standards exist for determining whether observational measurements are "acceptable" according to psychometric theory.

Furthermore, when acceptable and meaningful measurements <u>are</u> obtained, powerful methods exist within the quantitative approach for summarizing and analyzing them. Thousands of hours of observation can be easily reduced to a small set of numbers which can be presented in tables or graphs. As critics claim, much day-to-day detail is lost in this process, but if one

is to generalize from many observations, be they quantitative or ethnographic, one is forced to ignore some detail in making summary statements.

Perhaps the most important feature of the quantitative approach is that it allows one to screen the data for relationships which are probably not due to chance. Humans seem to have a propensity for finding patterns in almost anything. The stars in the sky, for example, are arranged in an essentially random order, yet many years ago people identified "meaningful" constellations of stars. Anyone can look closely at a table of random numbers and see patterns which appear to exist within it. We need some criteria to help restrain our tendency to find meaning in practically everything if research is not to disintegrate into a haphazard pursuit over spurious relationships. It is for this reason that tests of significance were devised and for which the concept of Type I and Type II errors was invented so that standards would exist by which we can accept or reject hypotheses. This methodology does not claim that the resulting decisions to reject or accept hypotheses will be infallible. But at least it is recognized that these decisions involve a certain degree of risk and the relative risks are made explicit.

The quantitative method requires one to make abstractions from the real world. In operationalizing measurements one abstraction is made. In summarizing and making inferences from data, further abstractions are made. As the proponents of the qualitative approach charge, these abstractions may prove inadequate for studying classroom processes. However this process of abstraction is the basis of all logical inference, not of quantitative inference only. As such, it is the basis of inferences based on qualitative data as well. If one does not accept the process of

logical inference, then qualitative methodology as well as quantitative methodology should be unacceptable. However, if one has the faith or belief that logical inference can lead to valid conclusions about human behavior, then the process of quantitative inference should be acceptable in principle. Furthermore, the fact that quantitative methodology makes its assumptions explicit, has standards by which data may be found valid or invalid, and has procedures for accepting or rejecting hypotheses make it a strong methodology. However, it may be the case that because our knowledge of human behavior is at such a primitive stage that we have difficulty formulating the proper questions or collecting meaningful data at this time. Because of this, the qualitative approach may have value in helping us learn enough about the classroom to use the quantitative methodology more fruitfully.

Qualitative Methodology: Strengths and Weaknesses

Qualitative research appears to be a highly personal enterprise, and therein lies both its strengths and its weaknesses. Consider two quantitative researchers conducting parallel studies. Both use the same instruments and variables, sample from the same population in the same manner, collect data in identical ways and use the same statistical procedures. In principle, both researchers should obtain the same results (within the limits of sampling error) and should reach similar conclusions.

In contrast, consider two qualitative researchers entering the same classroom for observation over a period of time. Is it likely that the two observers will see the classroom in similar ways? It does not seem likely since there are many ways in which the two ethnographers could diverge as their views of the classroom evolve in the process of observation.

Such divergence seems inevitable when one considers the complexity of the classroom and the limits of humans to process information.

Anyone who has attempted to objectively observe a classroom, either as a quantitative or a qualitative researcher, must agree that a classroom is a very complex, dynamic social system. A typical classroom might consist of a teacher plus some twenty to thirty students. It is simply impossible for any human observer to see <u>everything</u> that occurs in such a system. Some selection of information must occur. One must therefore expect that in practice two ethnographers' conclusions would differ since they would be forced to select information for processing and since no two observers would filter this information in exactly the same way. Such selective perception seems inevitable especially as the ethnographer's impressions begin to gel. For an ethnographer's current impressions or hypotheses must influence the selection of future information as he or she attempts to verify or reject these hypotheses. In effect, even though two ethnographers might be physically present in the same classroom at the same time, from a subjective point of view they exist in two different classrooms since they select observational information in different ways. In essence, no two ethnographers operate from the same data base, hence their conclusions will differ, at least to some degree.

These parallel ethnographers might begin to diverge from one another even if their data base were the same, for even the same data might be interpreted in quite different ways. Much observational data requires that some inferences be made in order that they be understood. For example, two observers might see a student displaying a distant gaze while the teacher is talking. Is that student thinking about something completely unrelated

to what the teacher is saying, or is the student deep in thought about academic material? One cannot answer this question without using supplemental information in an inferential way. But two ethnographers might have observed or recalled different events in making such an inference. so that their synthesis of information might be quite different. Thus at this stage, let us call it the stage of observational inference, two observers might diverge from one another.

Related to this is the ability of ethnographers to see events as the participants see them. One of the hallmarks of qualitative methodology is its claimed ability to report the subjective worlds of the participants. Yet how validly can observers do this, especially in a classroom situation. For in a classroom, typically only one of the participants is an adult while the remainder are children. Yet ethnographers, at least in research which has been published thus far, are always adults. How accurately can any adult, even a trained and sensitized adult, report the subjective world of a child, especially of a young child whose logical system might be radically different from an adult's? Yet in a real classroom, an ethnographer must make many conscious or unconscious inferences of this sort very quickly as events transpire during observation.

Still another point at which ethnographers might diverge is in their final synthesis of information after a period of observation is complete. Even if two observers had identical data bases and identical observational inferences to work from, it seems unlikely that they would synthesize such information in the same way. Classroom ethnography produces reams of narrative data. Such data are not easily summarized. Themes must be identified, "important" events must be isolated from "incidental" events,

vast amounts of information must be synthesized in a manner which will do justice to the complexity of the classroom. It is unrealistic to expect that two people would do this in the same way and reach the same conclusions.

Thus, there are many ways in which two ethnographers might observe the same classroom but form different conclusions about it. The problems of selective perception, of observational inference, and of final synthesis would virtually guarantee different conclusions. These problems are not unique to the domain of qualitative methodology; quantitative researchers must face the same problems. But by defining variables beforehand, training observers until they reach satisfactory levels of reliability, and by analyzing data in an appropriate manner, the quantitative researcher deals with these matters in an open and public manner. A major difficulty with ethnography is that as one reads narrative material or the conclusions of an ethnographer who has observed a classroom for a period of time, one can never be sure how the ethnographer dealt with these problems. Even the ethnographer may not be fully aware of how he or she made the many thousands of decisions underlying his or her conclusions or impressions. For how can any ethnographer observe both the classroom in all its complexity and his or her inner processes during observation with any degree of accuracy?

All of these criticisms basically reiterate the statement that ethnography appears to be a highly personal enterprise. Your ethnography is bound to be different from my ethnography. If I read your narrative or conclusions, I have no way of knowing whether your observations are biased and shallow or deep and insightful. In fact, such a decision is itself a subjective one which must be made relative to my guess about what I would have concluded from a similar set of observations. This is the weakness of the qualitative

approach: it yields conclusions or results which are not repeatable, even in principle, whereas this is not true of the quantitative approach. If I wish to know a classroom, I must do my own ethnography. Ethnography performed and reported by somebody else is of dubious and limited usefulness for my gaining an understanding of the classroom. In short, because ethnography is not reproducible, its conclusions lack generalizability.

There is another reason for this lack of generalizability--a reason which is more practical than theoretical. In order for a study to be generalizable, it must adequately sample the objects and behaviors of interest. In educational research, this means that one must sample a number of classrooms if one hopes to make meaningful conclusions. This is especially important in field research where the researcher typically has no control over selection factors which may influence outcome. Perhaps the single most important selection factor in classroom research is the achievement level of students at the beginning of the school year, since this pretest level is known to correlate highly with posttest achievement level. This fact has led to the widespread use of the covariance model in an attempt to isolate teachers' influence on student gain. Logically, the covariance model is analagous to studying a number of low-pretest, medium-pretest, and high-pretest classroom simultaneously. If each achievement level is represented by a sufficient number of classrooms, then teacher influences can be isolated from the influence of incoming achievement level.

Although the language used above is borrowed from quantitative methodology (words such as "pretest," "covariance," etc.), these words represent problems which hamper the formation of logical inferences regardless of methodology.

The confounding of selection factors (such as achievement level) with treatment factors (teacher behavior) in field research makes conclusions difficult and equivocal, especially if one's sample of classrooms is small and unrepresentative. Yet using qualitative methodology it seems impossible to observe more than a handful of classrooms, since ethnographers can be in only place at a time. A large-scale quantitative research project is possible because a number of reliable, interchangeable observers can be employed and because the resulting data can be easily combined into a single data file. However, because qualitative observers are not interchangeable, many problems would be encountered in a large-scale qualitative project. The resulting data would consist of volumes upon volumes of narratives. Who could read such a vast amount of observational material and synthesize it? How could anyone take all of the necessary "covariables" into account in forming conclusions? How would the differing views of the ethnographers be reconciled with one another? The problems of large-scale qualitative research are immense, to say the least.

We have argued that ethnography is a poor inferential tool. But it has great value as a descriptive tool, and it should have a place in research as a means of getting familiar with the phenomenon under study, with the shortcomings of quantitative instrumentation, and as a means of generating hypotheses. One can read journal article after journal article about classrooms, but there is no substitute for rigorous qualitative observation as a basis for formulating ideas about classroom processes. Because of the problems of making inferences from ethnographic research, one's conclusions from such observations may not be believed by other. But a researcher who does his or her own observation or who reads the

narratives of trusted ethnographers is bound to gain insights which can be used to guide present or future research. Hypotheses formed from such observation can then be operationalized and tested in quantitative terms in order to convince others of the truthfulness of one's generalizations. In this view, qualitative research is not seen as a competitor of quantitative research, but rather as a useful adjunct.

A Study Involving Quantitative and Qualitative Methodologies

The preceding discussion of qualitative and quantitative methods evolved from readings, theoretical discussions, and past experience with educational research in general, and classroom observations in particular. In order to explore some of these ideas further, a study was conducted which allowed the direct comparison of quantitative and qualitative data. This study involved the training of both ethnographers and classroom coders. Nine classrooms were observed repeatedly and simultaneously by an ethnographer and a coder using an observation system. This design yielded quantitative and qualitative data based on observations made at the same times in the same classrooms. With only nine classrooms in the sample, it was not possible to make generalizations about classrooms or teaching per se. However, it was hoped that the data which were collected could be compared in order to highlight the types of information which the two methods yield and to evaluate the degree to which they create similar pictures of the classroom.

## Method

### Sample

The sample consisted of nine second-grade classrooms in two small school districts. Four of the classrooms were in a rural district with

an ethnically mixed population; the remaining five classes were in a predominately white suburban district. Overall, the sample included students of high, medium, and low socioeconomic status. The level of experience among the teachers ranged from no previous teaching to nine years of experience.

The focus of observation was reading instruction. Observation began in late November, 1978, and continued throughout the rest of the school year. Each classroom was observed during reading instruction by an ethnographer and a classroom coder ten times throughout the year, and each observation lasted 90 minutes. For each classroom, three of the ten observations were also videotaped.

Observation System

The classroom observation system chosen for this study was one developed by the Stanford Research Institute (SRI) for use in the evaluation of the National Follow Through programs (Stallings and Kaskowitz, 1974). This rather complex system has several sections, but of particular interest was the Five Minute Observation (FMO). The FMO records classroom interactions in "frames" completed four times per hour. There are four codes comprising each frame describing who performed the action (teacher, child, small group, etc.,), to whom it was directed (teacher, child, small group, etc.,), and what was done (command, direct question, response, praise, no response, etc.). In addition, there are a number of optional modifiers with which a coder can indicate whether an interaction was academic or behavioral, verbal or nonverbal, and whether the interaction could be further categorized by other modifiers such as "organizing," "warmth," "punishment," or "touching." In essence, each frame is a

sentence with a noun, object, verb, and optional modifiers. An FMO record, then, is a series of frames or sentences which describe interactions, and can be thought of as a coded ethnographic record. For this reason, the FMO seemed especially appropriate for comparison with ethnographers' narrative records.

A coder used in a previous study and a housewife who responded to a newspaper advertisement served as SRI coders. A week of intensive training was provided by an expert SRI coder who had worked with the authors of the system. Reliability was assessed at the end of training by having the expert and the two trainees view a videotape of classroom interaction. The expert's codes were accepted as a standard, and a count was made of the number of times the trainees' "who," "to whom," "what," and "how" codes agreed with the standard. Using this method, 92.4% of one trainee's codes and 93.2% of the other's codes were found to agree with the expert's. This was considered a satisfactory level of agreement to allow the trainees to go into the field.

Generalizability theory (Cronbach, Gleser, Nanda and Rajaratnam, 1972) was used to further assess the reliability of the coders. During the spring of the study, two of the teachers in the sample were observed by both of the coders. The FMO data from the first hour of these two observations, consisting of four, five-minute observations, were used for the generalizability analysis. The design was a four-facet design involving coders, teachers, observations, and categories on the FMO. This was a fully crossed design, and all variables were considered random. The "who," "to whom," "what," and "how" sections of the FMO were analyzed separately since each section is coded independently within a

frame. The frequencies of each of the codes within each of these sections for each of the five-minute observations served as the unit of analysis.

The facet of interest consisted of the FMO categories in each section. The purpose of the analysis was to determine the dependability of these category frequencies generalized across the remaining facets (coders, teachers, and observations). The generalizability for one category coded by one observer on one teacher during one five-minute observation was found to be .96, .64, .51, and .83 for the "who," "to whom," "what," and "how" sections, respectively. However, these coefficients do not truly represent the generalizability of the scores which would be used for comparison with the ethnographic data. The coefficients reported above represent the generalizability of scores obtained during <u>one</u> five-minute observation. The scores of interest, however, are the frequencies obtained by summing across all observations throughout the school year. Since data were obtained for approximately 60 five-minute observations for each teacher, the generalizability coefficients should be based upon 60 observations, rather than one observation. Cronbach, et al. provide formulas for estimating generalizability for a given number of levels of a facet, much as the Spearman-Brown Prophecy formula estimates the reliability of a test for a given number of items. Using these formulas, the estimated generalizability coefficients for these aggregate frequencies were .99, .98, .94, and .99 for the four sections of the FMO. Thus, the evidence suggests that the frequency data from the year's observations were quite reliable.

Ethnographers

Through newspaper advertisments, three ethnographers were chosen. All three were graduate students, one in sociology, one in anthropology, and one in educational psychology. Selection of these students was made on the basis of their displayed aptitude for accurate, sensitive, and empachetic observation as well as an ability to communicate clearly. Training was conducted over a period of four weeks by two staff members who had extensively researched classroom ethnography and who had consulted with others involved in training ethnographers. This training procedure was described in detail by Johnson and Gardner (1979). Briefly, the training had four objectives: (1) to facilitate an understanding of the conceptual focus of the research study, (2) to establish the technique and intellectual orientation for a common ethnographic approach, (3) to instruct the ethnographers in ethnographic techniques, and (4) to establish reliability among the ethnographers. "Reliability" in the fourth objective was not strict psychometric reliability but a more informal agreement among the ethnographers concerning the scope, detail, and interpretation of observation. This was achieved by having the ethnographers observe and discuss videotape vignettes of classrooms at regular intervals.

During their classroom observations, the ethnographers kept running narratives of the events which transpired as well as of their impressions and feelings about what they observed. Because these field notes were rather voluminous, it was somewhat difficult to read them and compare them with the FMO data. Therefore, during the summer following the observation phase of this study, the ethnographers were asked to use their narratives and their recollections of the teachers to write "clinical descriptions"

of the teachers they had observed. These ethnographic summaries served as the qualitative data base for this study.

## Results

### Reducing the FMO Data

Each FMO frame consists of a "who" code, a "to whom" code, and a "what" code. In addition, the code may contain a "how" modifier, as well as a code indicating whether the behavior was academic or non-academic as well as verbal or non-verbal. Many possible combinations of these codes are possible. In order to create profiles of classroom behaviors, these data were reduced to a relatively small number of categories. As a first step in data reduction, a simple count was made of the number of unique frames which occurred out of the approximately 42,000 frames which were recorded. A "unique frame" was a combination of "who," "to whom," "what," and modifier codes which differed from every other combination found to occur. Out of the 42,000 frames, 610 unique frames were identified. Counts were made of the number of occurrences of each of these unique frames. About one-third of the unique frames occurred only once out of a total of 42,000 frames. Nearly half of the 610 frames occurred three times or fewer. Only 12% of them occurred 100 times or more, and only 2% occurred 1,000 or more times. It was clear from this frequency analysis that many of the unique frames occurred very infrequently. However, there were also quite a few frames which did occur fairly frequently--too many to be dealt with individually as the basis of classroom profiles. It was necessary to combine frames into a limited number of categories with which to summarize the data.

Because of the great flexibility of the FMO, there are many possible ways in which categories could be formed, and no claim is made that the scheme used here is necessarily the best. However, the category system used in this study did seem useful, and was designed to satisfy the following criteria: (1) it divided the "pie" of classroom behavior into sensible units of the sort found on many observation systems, (2) most of the created categories occurred with fairly high frequency in at least some of the nine classrooms studied, and (3) it utilized a large amount of the data (i.e., a fairly small number of the unique frames were not encompassed by one of the created categories).

The category system was a hierarchical one consisting of two levels. On the top level were major categories which were divided into subcategories on the second level. The major categories were created from combinations of "who" and "to whom" codes which were found to occur most often. This system therefore categorized interactions according to who initiated them and to whom they were directed. They were further divided into teacher-initiated and student-initiated interactions. The teacher-initiated categories were: Teacher-initiated individual interactions, teacher-initiated large group interactions, teacher-initiated small group interactions, and teacher non-instructional behavior. The student categories included student-initiated individual interactions, large group initiated interactions, and small group interactions. These major teacher- and student-initiated categories were further subdivided into a number of subcategories. This procedure categorized 94% of the total frames. It was felt that this system captured most of the major dimensions of classroom behavior and that the excluded frames were of little educational

importance (such as the teacher running a record player, interacting with an aide, etc.).

Figure 1 shows a profile for one of the nine teachers. The format of these profiles is similar to one used by Stallings, Needels and Staybrook (1979). On the left-hand side of the profile is listed each category and the subcategories contained within it. On the far right-hand side are two sets of percentages, one pertaining to the sample of nine teachers as an aggregate, the other to the teacher of interest. The teacher categories and the student categories were treated separately in computing these percentages. The percentages for the major teacher categories reflect the percentage of the total teacher-initiated frames which fell into the category. Thus, the percentage for "T initiated individ. interact. -- Total" indicates the percentage of the total teacher-initiated interactions which were directed towards an individual student. Similarly, "S initiated interactions -- total" indicates the percentage of the total student-initiated interactions which were initiated by a single student. All of these percentages were calculated separately for the sample as a whole and for the teacher of interest, and are listed under the "sample avg." and "this class" columns. The difference between these two figures indicates the degree to which the individual classroom displayed a high or low amount of the behavior. The graph on each figure shows this difference.

In Figure 1, for example, 53.9% of the sample's teacher-initiated interactions were directed towards an individual student, while 58.0% of Teacher 8's interactions were student directed. Since Teacher 8 was relatively high on this behavior, an "X" was placed on the right side of

the deviation axis to show that the teacher was approximately four percentage points above the sample average on this category. An "X" to the right of the zero point indicates a relatively high amount of the behavior, an "X" to the left indicates a relatively low amount of the behavior, while an "X" in the middle indicates an average amount of the behavior, relative to the sample of nine teachers. On the next major category, "S initiated interaction -- total," the class average of 84.5% differed from the sample average of 80.5% by 4.0 percentage points. Therefore, an "X" has been placed under the 4.0 point on the axis.

The percentages for the subcategories were computed in the same manner, except that their percentages were computed relative to their respective categories. In Figure 1, it can be seen that for the sample 17.5% of the total teacher-initiated individual interactions were in the "T command or request" category, while Teacher 8 made commands or request in 24.6% of her interactions directed towards individual students.

The percentages and the deviations in percent indicate the relative number of frames involving the category, and loosely reflect the amount of time devoted to these categories. It is very important to realize that these percentages were computed in a hierarchical fashion. The major teacher categories reflect the proportion of total teacher time spent in each category, while the student categories were computed in terms of total student-initiated frames. The subcategories were computed in terms of the total number of category frames. One can examine, for example, a teacher's behavior towards individuals as opposed to large or small groups. Likewise one can compare students' behavior in groups with their behavior as individuals. From this information, one can begin to make inferences

about the ways in which teachers and students interact in various classroom contexts.

Other categorizations are available on the teacher profiles. On the bottom of the second page of each profile, all categorized interactions, whether student or teacher initiated, are broken down as academic, behavioral, or other. Academic interactions are those related to strictly academic matters (i.e., reading or spelling). Behavioral interactions indicate interactions involving behavioral corrections. Other task-oriented interactions include non-academic interactions such as procedural interactions and incidental conversations.

Page 3 of the profiles concerns affectively charged events. Because these events were rare, their occurrence was expressed in frequency rather than percent. It can be seen in Figure 1, for example, that for the sample as a whole, punishment occurred only 1.3 times out of the 10 observations, while three instances of punishment were observed for Teacher 8. The deviation graph for these events reflects the difference in frequency between the class and the sample average.

A great deal of information about the teachers can be gleaned from each of these profiles. With a little experience, one can infer a picture of the classroom by comparing percentages and frequencies in the various categories and subcategories. In the following pages, two profiles will be interpreted and compared with the clinical descriptions provided by the ethnographers. An attempt will be made to point out some of the ways in which the quantitative and qualitative descriptions correspond or are discrepant. Following this will be a more general discussion of the types of information which were present in the two sets of data. Readers who

wish to compare for themselves the quantitative profiles and the ethnographic summaries may obtain copies of them from the authors.

Case Study: Teacher 8

Looking at Teacher 8's profile (Figure 1), one notices that there is a large amount of individual interaction in this classroom. Both the teacher-initiated and student-initiated individual interactions were higher than average. In individual interactions, this teacher engaged in much direct questioning, nonverbal explanation (use of materials in explanation), and a relatively high amount of academic correction and guidance. Student responses consisted primarily of reading aloud. With large groups, this teacher engaged in an above-average amount of direct questioning and relatively little lecturing (verbal instruction or explanation). Large group responses were not especially frequent in this classroom. Small group interactions, both teacher- and student-initiated, were relatively infrequent. This teacher seemed to avoid small group instruction or explanation, relying more upon commands, requests, and direct questions. During the periods of observation, the small groups were never observed to read aloud.

Turning to non-instructional behavior, it can be seen that this teacher spent a great deal of time relative to the other teachers walking around the room, and less time doing paperwork (such as grading papers). Of its total interactions, this classroom had an average amount of behavioral interactions, a slightly below average amount of academic interactions, and a slightly elevated amount of other task-related interactions (such as procedural interactions). Among the affective categories, this teacher engaged in a remarkable number of unhappy or negative interactions relative

to the other teachers. In addition, slightly fewer than average student-initiated happy interactions were observed.

Putting these data together, one may infer that this teacher prefers to interact with individuals rather than groups. Within the reading groups, she prefers to have individuals read aloud and does not request group or choral reading. She engages in much academic correction, perhaps correcting students as they read aloud. The frequent use of commands or requests of individuals may be a result of frequently asking students to read aloud. Direct questions about reading are probably directed towards the reading group as a whole rather than towards individuals. When students are engaged in seatwork, this teacher seems to do a lot of walking around, probably checking on students and going over workbook material (nonverbal instruction and explanation). On the whole, some academic time may be taken away by matters of procedure and transition, although behavioral disruptions do not seem to be a problem. Nevertheless, relative to other teachers, a great number of the teacher's utterances are negative, and few of the pupils initiate happy interactions. Thus, there may be a rather somber, punitive atmosphere in this classroom.

Turning to the ethnographer's summary (Appendix A), many of the statements above are confirmed. This teacher places "considerable emphasis on practicing oral reading" (p. 3); "reading group usually entails students reading aloud individually" (p. 9). As students read aloud, the teacher "will usually help a student who stumbles on a word by giving them the word" (p. 9). This is the sort of individual academic correction which emerged on the profile. The daily routine for this teacher involved spending time to give students instructions for their assignments for

the morning, probably contributing to the relatively high amount of procedural interactions noted on the profile. During seatwork activities, the teacher walked around the room checking work. Much individual interaction occurred during this time as well as when the teacher handed back graded papers "with praise or critical comments" (p. 7). It is probably because of these activities that this teacher's profile showed a high amount of individual interaction.

One rather striking aspect of the ethnographer's summary is the many references to the teacher's stern demeanor. Reference is made to this teacher's "stern teaching style" (p. 3). The ethnographer states that her "teaching style is characterized by firmness and a no-nonsense approach" (p. 3). Teacher 8 "has a tendency to jump on children for small violations of informal rules" (p. 4), "her tone of voice is often critical and exasperated or irritated" (p. 4), "she will often grab a child roughly by the arm when they are misbehaving" (p. 4), her use of punishment is rated "high" (p. 11), and "she rarely appears pleased with anything and only appears calm when ordering a hamburger from the aide who comes in to take orders" (p. 11). Reading class is described as "a very business like time" with "an atmosphere which is somewhat formal and considerably demanding of student conformance to teacher rules" (p. 10).

This negative tone in the classroom appears to be associated with a general philosophy by which "the teacher makes it clear that students are responsible for their performance--that it is their fault for not listening or studying when they get things wrong (rather than taking a position that a student didn't understand or that the teacher didn't make something clear)" (p. 10). The ethnographer seems to place the blame for student misunderstandings

on the teacher's lack of clarity. "She does not seem sensitive to students having individual styles of learning and understanding. . . .her prompting techniques are very narrow and she does not give differential prompts based on the type of student or type of mistake made" (p. 11).

This teacher's negative tone was reflected on the profile by the high number of unhappy or negative teacher interactions (nearly three times the sample average). In addition, there was more punishment and negative touching observed in this classroom as well as fewer student-initiated happy interactions. It is interesting, however, that in absolute terms these events occurred rather infrequently. It will be recalled that each teacher was observed ten times for approximately 90 minutes per observation. Out of a total of about fifteen hours of observation, only 42 negative interactions were observed (an average of about 2.8 per hour). Only three instances of punishment and five instances of negative touching were recorded. Since the SRI coder and the ethnographer were both present at all observations, one must conclude that (1) the ethnographer exaggerated the negative tone of the classroom, (2) the SRI coder failed to record some negative interactions or judged them not negative, or (3) it does not take many negative interactions to create a negative atmosphere. These three possibilities are not mutually exclusive, and there is no evidence from these data which would eliminate any of them. However, there are two further discrepancies between the ethnographic and quantitative records. The narrative record gives the impression that because of the teacher's strict rules and the teacher's negative demeanor that there must be a high number of rule infractions and many behavioral interactions, yet the profile shows that the teacher's percentage of behavioral interactions

(3.7%) is nearly identical to the sample average (3.8%). Furthermore, the ethnographer states that the teacher's amount of praise is "very meager" (p. 10), yet of all teacher-initiated individual interactions in this classroom, 1.9% were classified as praise, as opposed to 2.3% for the sample as a whole.

The affective tone of this classroom influenced the ethnographer description a great deal. While the negative tone was reflected in the quantitative profile, it did not appear as extreme as the ethnographer stated. Both data sources gave similar pictures of the more mechanical aspects of this classroom, reflecting a great deal of reading aloud, much individual interaction, and a pattern of moving around the room to supervise students with their seatwork.

Case Study: Teacher 2

Figure 2 displays Teacher 2's profile. Among teacher-initiated individual interactions, there are elevations in the number of direct questions, achknowledgements, and behavioral corrections. There are relatively few student-initiated individual interactions, but the majority of them are academic verbal responses. Reading aloud was seldom observed in this classroom. Teacher 2 appears to have interacted with large groups more than the other teachers. These interactions consisted primarily of commands or requests and behavioral corrections. The modal large group response was nonverbal academic (i.e., raising hands). With small groups, there was a paucity of direct questions. Instead, there was much instruction and explanation and many behavioral corrections. The small group response, like the large group response, was raising of hands. This teacher spent less time than the other teachers in non-instructional

behaviors, but appeared to engage in walking around the room. In general, nearly twice as many interactions in this classroom were behavioral as were found in the sample as a whole. Despite this fact, this teacher was observed in relatively few unhappy or negative interactions, and punishment was never observed.

The picture which emerges from this profile is of a teacher who prefers to deal with groups. With large groups, she appeared to ask many questions; students raised their hands, answered, and the teacher acknowledged their responses. With small groups she presented information and asked relatively few questions. Much hand-raising was observed in the small groups also, however, perhaps to ask questions about the material presented. In stark contrast with the other classrooms, reading aloud was rarely engaged in by students in this class. This teacher apparently relied upon other means, perhaps silent reading, to teach reading skills. A high amount of behavioral correction was observed with individuals, and both small and large groups. Yet the teacher never utilized punishment and was less negative than other teachers. This suggests a rather lenient teacher and a somewhat chaotic classroom.

The ethnographer's summary (Appendix B) tells us that Teacher 2 was a first year teacher, and chaos was characteristic of the classroom. "The tone of the class was almost always noisy" (p. 1) and "the students often give the impression of coordinating activity to distract from any work" (p. 3). "Basically the teacher had a hard time controlling the class," the ethnographer states (p. 4). The reason for this appears to be the teacher's lack of authority. "She does not view herself or present herself as an authority figure" (p. 4). From the ethnographer's

perspective, "she acted like a normal person rather than a 'teacher' or authority figure" (p. 3). The ethnographer notes that the teacher once "expressed that she wants students to LIKE HER as well as regard her as a teacher" (p. 5). Teacher 2 tried to "personalize" rules for the students, apparently relying upon students' sense of social responsibility to guide behavior. "When someone misbehaves she personalizes their effect on the class, or on her" (p. 4). As a result, the ethnographer states, "I might characterize the relationship between teacher and student as a peer-personal one rather than a teacher-student one" (p. 4). As noted above, however, this teacher's strategy apparently was not very effective in controlling noise and disruption. In the face of this, however, "the teacher was consistent in the tone of voice used with the students, which was generally pleasant if a bit pleading on occasion" (p. 1).

Reading aloud was seldom observed by the ethnographer, especially after the first few observations. The teacher "said that students read better and enjoyed it more when they read silently" (p. 3). Moreover, "most of the latter half of the school year was spent on phonics, spelling, work skills, etc. rather than reading per se" (p. 3). Much of the narrative is concerned with issues of teacher control of the classroom, however some description of academic behavior is presented. "Teacher theoratically has students raise their hands but often calls on students at random" (p. 6). In addition, students "consistently" shout out answers, although they are encouraged to raise hands.

In terms of behavior control, the ethnographic summary and the teacher profile agree very well. There are many behavioral corrections, no punishment, and the teacher deals with the students in a consistently

pleasant tone of voice. Academically, the teacher's de-emphasis of reading aloud is apparent in the profile. There is much hand raising, but according to the narrative raised hands are frequently superceded by calling out answers. One point in which the two data sources disagree is when the ethnographer states that "the teacher dealt with the students primarily on a one-to-one basis" (p. 1). According to the profile, there was only an average amount of teacher-initiated individual interaction, an abundance of teacher-initiated large group interaction, and a lack of student-initiated individual interaction. However, this point is never expanded upon in the narrative so it is difficult to resolve this disagreement. In general, the narrative emphasizes control issues much more than academic issues, making it difficult to judge the accuracy of the quantitative picture of academic interaction. However, the picture of behavioral control provided by the two sets of data is clearly in agreement.

## Discussion

Comparisons between the ethnographic summaries and the quantitative profiles have been provided for two of the nine teachers. These were provided to give the reader a flavor of the types of information available from both sources and the degree to which they are in concordance with one another. In general, it was found that across the nine teachers there was general agreement between the two data sources, but that as in the two examples above, the emphasis upon various aspects of the classroom was uneven from narrative to narrative. Often it seemed that personality or behavioral issues were stressed more than academic issues. It was especially interesting to find that as with Teacher 8, slight elevations

in affective behaviors such as criticalness colored the narrative descriptions greatly. As was stated before, this could mean that slight differences in such behaviors greatly affect ethnographers' impressions of teachers, or it may be due to differential emphases placed upon affective elements by the ethnographers and the coders. In any event, the influence of teacher affect upon ethnographic description would seem to be an interesting and important avenue of future research.

The remaining profiles and descriptions can be obtained from the authors, and interested readers are invited to compare these for themselves from whatever perspective they find useful. In comparing them ourselves, a number of shortcomings in the measurement of classroom behavior became apparent to us. These will be discussed below in the hope that they may be useful to those who design future observation systems or who use some of the currently available ones.

Questions

Nearly all teacher observation systems measure some aspect of questioning behavior. Yet from reading the narratives, it is apparent that much information which is potentially important is being missed. For example, are the questions easy or difficult? Do the questions fit the material being taught? One teacher was observed asking comprehension questions about reading material at convenient breaks (e.g., as each page was completed) rather than at logical breaks (e.g., at breaks in paragraphs or ideas). Does the teacher make any attempt through her questions to make the material interesting or relevant, or are her questions simply mechanical or uninspired?

Does the teacher give students sufficient time to produce an answer? If an answer is incorrect, does she use prompts? Are the prompts geared to individual students? Is her repertoire of prompts sufficient? Do they generally work? How is an answer finally obtained? From the original student? From another student? From the teacher herself? Once the final answer is obtained, does everyone involved understand the answer or remember the question? Does everyone in the class or in a group have an equal chance of answering a question, or are certain students singled out? Does the teacher call on a volunteer or choose a student at random?

Organization

Is the student's day a series of disconnected tasks, or does the teacher attempt to provide some overall structure to the day? Does the teacher confer with individual students to help them organize their time around areas in which they need work? How much time does the teacher spend explaining assignments to students before setting them loose to do seatwork? From the narratives it appears that it may be worthwhile for a teacher to spend extra time explaining tasks initially so as to avoid confusion and redundant questions once students begin to work independently.

Behavioral Intervention

Is the teacher consistent in enforcing rules, or does she repeatedly state the rules while tolerating violations? What level of noise is a teacher willing to allow? Are there cycles (patterns of rising and falling) to the noise level in the classroom? How often does the teacher need to interrupt academic work to quiet the class or particular students? Are the teacher's behavioral interventions effective? What impact does the

teacher's praise or criticism have? Are praise and criticism overused or underused by the teacher?

This list is by no means exhaustive of the sorts of behaviors and classroom characteristics which might be of importance and which receive little attention among current observation systems. Some of these behaviors might be more easily measured than others, and some might require a rating rather than a simple counting system. But they illustrate some of the ways in which observation systems to date have been lacking. Simply counting the number of questions, for example, is not enough. We must somehow measure the quality of the questions, their appropriateness, and the sort of answers they produce. It is not enough to simply count the number of times praise or criticism is used, we must also measure its impact. In short, much observational measurement thus far has been concerned with the mechanics of teaching rather than with its content.

Qualitative methodology seems an excellent way of capturing this content, but for reasons mentioned in earlier sections of this paper, it is not a very powerful inferential method. What is needed is an effort to translate some of these more complex aspects of the classroom into constructs which can be measured in the quantitative sense. In this small study, ethnography has proved very useful in pointing out some of the shortcomings of current quantitative systems and in suggesting ways in which they may be improved. Calls have been made to integrate the two methodologies, yet it may not be possible to integrate the quantitative and qualitative approaches so that they can be used in

tandem as data sources in inferential studies. Qualitative data seem too subjective and too awkward to be used inferentially in large scale studies. However, qualitative methodology does seem to have a place as a preliminary step in designing a study and especially in designing research instruments. It seems obvious that the more familiar a researcher becomes with the phenomenon under study, the better the research which he or she can produce. From our experience with ethnography, we feel that there is probably no better way to familiarize oneself with a phenomenon than through the qualitative methodology.

## References


Bishop, Y.M., Fienberg, S.E., & Holland, P.W. Discrete Multivariate Analysis: Theory and Practice. Cambridge, Mass.: MIT Press, 1978.

Borich, G.D., Malitz, D., & Kugle, C.L. Convergent and discriminant validity of five classroom observation systems: Testing a model. Journal of Educational Psychology, 1978, 70, 119-128.

Campbell, D.T. "Degrees of freedom" and the case study. In T. Cook and C. Reichardt (eds.) Qualitative and Quantitative Methods in Evaluation Research. London: Sage Publications, 1979.

Campbell, D.T., & Fiske, D.W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.

Cooley, W.W., Leinhardt, G., & McGrail, J. How to identify effective teaching. Anthropology & Educational Quarterly, 1977, 8, 119-126.

Cronbach, L.J. Beyond the two disciplines of scientific psychology. American Psychologist, 1975, 30, 116-127.

Cronbach, L.J., Gleser, G.C., Nanda, H., & Rajaratnam, N. The Dependability of Behavioral Measurements. New York: John Wiley & Sons, 1972.

Filstead, W.J. Qualitative methods: A needed perspective in evaluation research. In T. Cook and C. Reichardt (eds.) Qualitative and Quantitative Methods in Evaluation Research. London: Sage Publications, 1979.

Johnson, N.K., & Gardner, C.H. Toward a Prototype for Training Classroom Ethnographers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, 1979.

Lutz, F.W., & Ramsey, M. The use of anthropological field methods in education. Educational Researcher, 1974, 3, 5-9.

Meehl, P.E. Clinical vs. Statistical Prediction. Minneapolis: University of Minnesota Press, 1954.

Rist, R.C. Blitzkrieg ethnography: On the transformation of a method into a movement. Educational Researcher, 1980, 9, 8-10.

Simon, A., & Boyer, E.G. (Eds.) Mirrors for behavior. Philadelphia: Reserach for Better Schools, Inc., 1970.

Stallings, J.A., & Kaskowitz, D.H. Follow Through Classroom Observation Evaluation, 1972-73. Menlo Park, California: Stanford Research Institute, 1974.

Stallings, J., Needels, M., & Staybrook, N. How to Change the Process of Teaching Basic Reading Skills in Secondary Schools: Phase II and Phase III. Menlo Park, California: SRI International, 1979.

Figure 1

INTERACTION PROFILE FOR TEACHER 08 (PAGE 1 OF 3)

| VARIABLE NAME | PERCENT DEVIATION FROM SAMPLE AVERAGE (LESS FREQ ... AVG ... MORE FREQ) | PERCENT SAMPLE AVG. | PERCENT THIS CLASS |
|---|---|---|---|
| T INITIATED INDIVID. INTERACT. -- TOTAL | | 53.9 | 58.0 |
| T COMMAND OR REQUEST | | 17.5 | 24.6 |
| T DIRECT QUESTION | | 21.9 | 13.7 |
| T RESPONSE | | 9.2 | 4.2 |
| T INSTRUCT., EXPLANATION -- VERBAL | | 9.1 | 6.1 |
| T INSTRUCT., EXPLANATION -- NONVERBAL | | 3.2 | 9.6 |
| T TASK RELATED COMMENTS | | 4.1 | 2.9 |
| T ACKNOWLEDGMENTS | | 12.9 | 8.8 |
| T PRAISE | | 2.3 | 1.9 |
| T CORRECT. OR GUIDANCE -- ACADEMIC | | 12.3 | 21.2 |
| T CORRECT. OR GUIDANCE -- BEHAVIORAL | | 4.5 | 4.4 |
| T OBSERVING OR LISTENING | | 3.1 | 2.4 |
| S INITIATED INTERACTIONS -- TOTAL | | 80.5 | 84.5 |
| S QUESTIONS | | 12.7 | 4.3 |
| S VERBAL RESPONSE -- ACADEMIC | | 49.5 | 44.8 |
| S NONVERBAL RESPONSE -- ACADEMIC | | 11.4 | 12.3 |
| S BEHAVIORAL RESPONSE | | 3.7 | 3.9 |
| S READING ALOUD | | 17.8 | 32.5 |
| S NO RESPONSE OR DON'T KNOW | | 4.9 | 2.3 |
| T INIT. LARGE GROUP INTERACT. -- TOTAL | | 19.6 | 17.6 |
| T COMMAND OR REQUEST | | 19.3 | 22.8 |
| T DIRECT QUESTION | | 19.6 | 25.7 |
| T INSTRUCT., EXPLAN. -- VERBAL | | 34.4 | 26.7 |
| T INSTRUCT., EXPLAN. -- NONVERBAL | | 1.9 | 0.8 |
| T TASK RELATED COMMENTS | | 2.0 | .5 |
| T ACKNOWLEDGMENTS | | 1.9 | 3.8 |
| T CORRECTS. OR GUIDANCE -- BEHAVIORAL | | 3.8 | 2.8 |
| T OBSERVING OR LISTENING | | 17.1 | 18.4 |

| VARIABLE NAME | PERCENT DEVIATION FROM SAMPLE AVERAGE (<2 \| 1 \| 1 \| 0 \| 0 \| 0 \| 1 \| 1 \| 2> / <0 \| 5 \| 0 \| 5 \| 0 \| 5 \| 0 \| 5 \| 0>) | PERCENT SAMPLE AVG. | PERCENT THIS CLASS |
|---|---|---|---|
| LARGE GROUP INITIATED INTERACT, -- TOTAL | X | 10.8 | 9.5 |
| LG. GRP. VERBAL RESP, -- ACADEMIC | X | 48.6 | 52.5 |
| LG. GRP. NONVERBAL RESP, -- ACADEMIC | X | 42.8 | 41.0 |
| LG. GRP. BEHAVIORAL RESPONSE | X | 4.6 | 6.0 |
| LG. GRP. CHORAL RESP. | X | 4.0 | .5 |
| T INIT. SMALL GROUP INTERACT, -- TOTAL | X | 11.3 | 7.9 |
| T COMMAND OR REQUEST | X | 26.3 | 32.8 |
| T DIRECT QUESTION | X | 25.4 | 29.5 |
| T INSTRUCTION OR EXPLANATION | X | 31.1 | 14.6 |
| T ACKNOWLEDGMENT | X | 2.5 | 4.5 |
| T CORRECT. OR GUIDANCE -- ACADEMIC | X | 2.1 | 1.9 |
| T CORRECT. OR GUIDANCE -- BEHAVIORAL | X | 2.4 | 4.1 |
| T OBSERVING OR LISTENING | X | 10.2 | 12.7 |
| SMALL GROUP INITIATED INTERACT, -- TOTAL | X | 8.7 | 5.9 |
| SM. GRP. VERBAL RESP, -- ACADEMIC | X | 48.1 | 51.1 |
| SM. GRP. NONVERBAL RESP, -- ACADEMIC | X | 45.5 | 48.9 |
| SM. GRP. READING ALOUD | X | 6.3 | 0.0 |
| T NON-INSTRUCTIONAL BEHAV, -- TOTAL | X | 15.2 | 16.5 |
| T WALKING AROUND ROOM | X | 9.9 | 25.9 |
| T ENGAGED IN PAPERWORK | X | 90.1 | 74.1 |
| TOTAL INTERACTIONS | X | 100.0 | 100.0 |
| TOTAL ACADEMIC | X | 78.2 | 75.8 |
| TOTAL BEHAVIORAL | X | 3.8 | 3.7 |
| TOTAL OTHER TASK-ORIENTED | X | 18.1 | 20.5 |

TABLE:

INTERACTION PROFILE FOR TEACHER 08 (PAGE 3 OF 3)

| VARIABLE NAME | DEVIATION FROM SAMPLE AVERAGE: LESS FREQ <2 <0 | 1 1 5 | 1 0 0 | 0 0 5 | AVG 0 0 | 0 1 5 | MORE FREQ 1 1 0 | 1 1 5 | 2> 0> | FREQUENCY: SAMPLE AVG. | THIS CLASS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T INIT. HAPPY INTERACTIONS | | | | X | | | | | | 4.0 | 3.0 |
| S INIT. HAPPY INTERACTIONS | | | X | | | | | | | 8.1 | 3.0 |
| T INIT. UNHAPPY OR NEG. INTERACT. | | | | | | | | | X | 15.8 | 42.0 |
| PUNISHMENT | | | | X | | | | | | 1.3 | 3.0 |
| TOUCH (NEGATIVE) | | | | | X | | | | | 1.8 | 5.0 |

Figure 2

INTERACTION PROFILE FOR TEACHER 02 (PAGE 1 OF 3)

| VARIABLE NAME | PERCENT DEVIATION FROM SAMPLE AVERAGE (<2 <0 \| 1 5 \| 1 0 \| 0 5 \| 0 0 \| 0 5 \| 1 0 \| 1 5 \| 2> 0>) | SAMPLE AVG. | THIS CLASS |
|---|---|---|---|
| T INITIATED INDIVID. INTERACT. -- TOTAL | | 53.9 | 53.1 |
| T COMMAND OR REQUEST | | 17.5 | 14.7 |
| T DIRECT QUESTION | | 21.9 | 26.1 |
| T RESPONSE | | 9.2 | 9.9 |
| T INSTRUCT., EXPLANATION -- VERBAL | | 9.1 | 7.1 |
| T INSTRUCT., EXPLANATION -- NONVERBAL | | 3.2 | 0.0 |
| T TASK RELATED COMMENTS | | 4.1 | 4.2 |
| T ACKNOWLEDGMENTS | | 12.9 | 17.9 |
| T PRAISE | | 2.3 | 4.1 |
| T CORRECT. OR GUIDANCE -- ACADEMIC | | 12.3 | 7.9 |
| T CORRECT. OR GUIDANCE -- BEHAVIORAL | | 4.5 | 7.5 |
| T OBSERVING OR LISTENING | | 3.1 | .7 |
| S INITIATED INTERACTIONS -- TOTAL | | 80.5 | 76.3 |
| S QUESTIONS | | 12.7 | 16.9 |
| S VERBAL RESPONSE -- ACADEMIC | | 49.5 | 66.0 |
| S NONVERBAL RESPONSE -- ACADEMIC | | 11.4 | 6.0 |
| S BEHAVIORAL RESPONSE | | 3.7 | 4.7 |
| S READING ALOUD | | 17.8 | .7 |
| S NO RESPONSE OR DON'T KNOW | | 4.9 | 5.7 |
| T INIT. LARGE GROUP INTERACT. -- TOTAL | | 19.6 | 31.7 |
| T COMMAND OR REQUEST | | 19.3 | 24.6 |
| T DIRECT QUESTION | | 19.6 | 15.5 |
| T INSTRUCT., EXPLAN. -- VERBAL | | 34.4 | 34.5 |
| T INSTRUCT., EXPLAN. -- NONVERBAL | | 1.9 | 1.1 |
| T TASK RELATED COMMENTS | | 2.8 | 3.8 |
| T ACKNOWLEDGMENTS | | 1.9 | 0.0 |
| T CORRECTS. OR GUIDANCE -- BEHAVIORAL | | 3.8 | 8.1 |
| T OBSERVING OR LISTENING | | 17.1 | 13.2 |

# INTERACTION PROFILE FOR TEACHER 02

| VARIABLE NAME | PERCENT DEVIATION FROM SAMPLE AVERAGE (<2 <0 \| 1 5 \| 1 0 \| 0 5 \| 0 0 \| 0 5 \| 1 0 \| 1 5 \| 2> 0>) | PERCENT SAMPLE AVG. | PERCENT THIS CLASS |
|---|---|---|---|
| LARGE GROUP INITIATED INTERACT. -- TOTAL | | 10.8 | 19.5 |
| LG. GRP. VERBAL RESP. -- ACADEMIC | | 48.6 | 38.5 |
| LG. GRP. NONVERBAL RESP. -- ACADEMIC | | 42.8 | 58.1 |
| LG. GRP. BEHAVIORAL RESPONSE | | 4.6 | 3.4 |
| LG. GRP. CHORAL RESP. | | 4.0 | 0.0 |
| T INIT. SMALL GROUP INTERACT. -- TOTAL | | 11.3 | 7.7 |
| T COMMAND OR REQUEST | | 26.3 | 26.8 |
| T DIRECT QUESTION | | 25.4 | 9.4 |
| T INSTRUCTION OR EXPLANATION | | 31.1 | 47.1 |
| T ACKNOWLEDGMENT | | 2.5 | 0.0 |
| T CORRECT. OR GUIDANCE -- ACADEMIC | | 2.1 | 0.0 |
| T CORRECT. OR GUIDANCE -- BEHAVIORAL | | 2.4 | 14.5 |
| T OBSERVING OR LISTENING | | 10.2 | 2.2 |
| SMALL GROUP INITIATED INTERACT. -- TOTAL | | 8.7 | 4.2 |
| SM. GRP. VERBAL RESP. -- ACADEMIC | | 48.1 | 43.8 |
| SM. GRP. NONVERBAL RESP. -- ACADEMIC | | 45.5 | 56.3 |
| SM. GRP. READING ALOUD | | 6.3 | 0.0 |
| T NON-INSTRUCTIONAL BEHAV. -- TOTAL | | 15.2 | 7.6 |
| T WALKING AROUND ROOM | | 9.9 | 15.4 |
| T ENGAGED IN PAPERWORK | | 90.1 | 84.6 |
| TOTAL INTERACTIONS | | 100.0 | 100.0 |
| TOTAL ACADEMIC | | 78.2 | 77.2 |
| TOTAL BEHAVIORAL | | 3.8 | 7.7 |
| TOTAL OTHER TASK-ORIENTED | | 18.1 | 15.53 |

INTERACTION PROFILE FOR TEACHER 02 (PAGE 3 OF 3)

| VARIABLE NAME | DEVIATION FROM SAMPLE AVERAGE (LESS FREQ ... AVG ... MORE FREQ) <2 1 1 0 0 0 1 1 2> <0 5 0 5 0 5 0 5 0> | FREQUENCY SAMPLE AVG. | FREQUENCY THIS CLASS |
|---|---|---|---|
| T INIT. HAPPY INTERACTIONS | X | 4.0 | 4.0 |
| S INIT. HAPPY INTERACTIONS | X | 8.1 | 10.0 |
| T INIT. UNHAPPY OR NEG. INTERACT. | X | 15.8 | 5.0 |
| PUNISHMENT | X | 1.3 | 0.0 |
| TOUCH (NEGATIVE) | X | 1.8 | 3.0 |

INTERACTION PROFILE FOR TEACHER 88 (PAGE 3 OF 3)

| VARIABLE NAME | DEVIATION FROM SAMPLE AVERAGE: LESS FREQ <2 | 1 5 | 1 8 | AVG 0 5 | 0 8 | MORE FREQ 0 5 | 1 8 | 1 5 | 2> 8> | FREQUENCY: SAMPLE AVG. | THIS CLASS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T INIT. HAPPY INTERACTIONS | | | | | X | | | | | 4.8 | 3.8 |
| S INIT. HAPPY INTERACTIONS | | | | X | | | | | | 8.1 | 3.8 |
| T INIT. UNHAPPY OR NEG. INTERACT. | | | | | | | | | X | 15.8 | 42.8 |
| PUNISHMENT | | | | | X | | | | | 1.3 | 3.8 |
| TOUCH (NEGATIVE) | | | | | | X | | | | 1.8 | 5.8 |

Appendix A

CLASS PROFILE: TEACHER 08

Class 08 meets in a somewhat dark room which is located in the middle of the second grade cluster of three classrooms facing the street. The classroom is a crowded rectangular room with high windows facing the street side of the building and a row of waist high to ceiling windows facing the courtyard of the school. The courtyard side of the room is lined with waist high cabinets and a sink. On the counters of the cabinets stand a variety of instructional boxes such as Durrell-Murphy and SRA Schoolhouse reading kits. The street side of the room houses taller closets and shelf space. There is a blackboard lining the front of the room. In the back of the room there is a low set of stairs leading towards Class 07. In the space between the stairs and the courtyard wall the teacher has set up an area where puzzles and books are located. There is a dingy rug on the floor covering this space.

The teacher has her desk located in the front of the classroom to the right of the doorway leading into Class 09. Directly in front close to the outside doorway of her is a row of student desks. There is another row of desks near the street side of the classroom and a further group of desks in a square pattern in front of the rug area. In the front of the room there is a long table where the low group of students sit. In the front courtyard corner of the room there is a student desk on which sits a "Systems 80" machine - a large plastic object which looks like a computer terminal.

On the back courtyard corner of the room stands a wall heater painted red. Back walls are covered with various bulletin board materials which change throughout the year.

The room appears to be cluttered with student desks and materials. Desks are of the old design - wooden tops with space between top and bottom in which to place books and materials.

(Class profile 8, page two)

In this room, Teacher 08 works with those students who are lowest in reading ability in the second grade. She has 26 students, of whom 11 are female and 15 are male. Ethnic breakdown shows 11 blacks, 8 Meixcan-Americans, and 7 Anglos. Many students in the class are eligible and are given extra service through Title 1 reading and Special Education. The students who arein the lowest group in the class (those sitting around the long table in the front of the room) are often assisted by a Title 1 aide who enters the classroom during reading and joins the group. A number of students in the class have been retained in earlier years; a number will be retained at the end of this school year.

The teacher of this low class is a slim Anglo female in her late twenties or early thirties. She has short blond hair and is of medium hieght. She became pregnant in late fall and continued teaching throughout the school year. She is the team leader for the second grade. During the year she was involved in various duties related to her leadership role within the school district as well as being involved in pursuing bilingual certification with the rest of the second grade team. This is her fourth school district; she has taught second grade here for the past two years and taught first grade here the year before. A number of students in her class (Natasha L, Chris T. ) she taught when they were in first grade. She is a community resident of [redacted]

(taught low group last year also

Ms. 08 has explained that she sees her goal as getting all students in her class to be working in second grade readers before the end of the school year. To aid her in furthering this goal she uses a variety of materials and a stern teaching style.

Basal readers used in the class were chosen by the teacher from the set of readers adopted by the state. Ms. 08 uses Harper-Row series "because it an easy series". In addition, she is very familiar with the series - knowing the content of the stories and the sequence of skills stressed, and having materials already duplicated for use in skill development. She has her class divided

(from using it last year

into three reading group which are labelled 1, 2, and 3. Students are ability grouped with Group 1 students being in the highest reader and Group 3 being the small group sitting at the fron table.

Teacher 08 has definite views about the ways to teach reading. She stresses a phonetic approach with considerable emphasis on practicing oral reading. She talks about trying to make sure students read aloud every day - preferably two or three times a day. In addition Teacher 08 says that she has other instructional goals which stress students learning how to listen (she cites not- listening as the number one cause of problems in Interview 1), how to read directions and how to work indepepdently. Her planning of instruction takes into account a belief that students should be doing work that is below their frustration level, but above their level of boredom. To ensure that students are working at the appropriate level she tries to continually ascertain ability and skill level through informal channels.

In discussing her approach to reading instruction Teacher 08 stresses that low level students need to be taught somewhat differently than higher level students. In addition to having academic problems, the Teacher feels that her students have more social, behavioral and home problems. This necessitates different treatment at school.

Above all else, the teacher feels that a firm and consistent approach to her students produces the best results. Her actions are consistent with her philosophy in that her teaching style is characterized by firmness and a no-nonsense approach. She talks about feeling strongly that everyone should learn to read - which is why she says she likes the challenge of teaching low students. She is dubious of the merit of special programs for low students- observing that they are more trouble than they may be worth. She feels strongly that cooperation from home goes a long way in aiding students.

There are a number of general rules and expectations coloring activities. The teacher has a tendency to jump on children for small violations of informal rules such as not beginning work on time, not positioning oneself right at one's desk, not working neatly, not following procedural directions. There are a few formal rules such as staying seated during activities, returning materials on time and finishing work. These rules are strictly enforced, the punishment for transgression being loss of P.E. time. There is a place on the blackboard where a student writes his or her name when told to which denotes that they have lost P.E. privledge for the day. Usually the teacher will call to a child to write their name on the board and later on in the class period will come over to the child to explain the problem and chastise the child (see Stephanie, March Observation 2).

The teacher's posture and physical responses to students reinforces her no-nonsense approach to reading class. She moves briskly, arms crossed kepping her posture very erect. Her tone of voice is often critical and exasperated or irritated; her tone is considerably more pleasant when she works with the high ability math class. She monitors noise level closely, shaking a finger, calling a name or giving a warning glance to students whose voices are heard. Her phrases of warning and criticism stress that students should be listening and working. Some of her favorite phrases are "Get busy", "Wake up!", "Wou didn't listen!, and "You're finding out I mean business!". She will often grab a child roughly by the arm when they are misbehaving (i.e. talking to a neighbor).

Teacher 08 seems always on the edge, ready to find fault with a student. She appears to have a low level of trust, often accusing students of copying (see April-May observation 2). During seat work activities she walks around checking the written work of students who have problems beginning or carrying out work; she is much less likely to look at the work of capable students.

(Class profile, Teacher 08 page five)

Reading instruction goes on between 9:15 and 11:00, during which time there is a consistent se q uence of activities followed. The class begins with spelling from 9:15-9:45. Following spelling they are expected to do individual reading which is to be done silently. At 9:55 the aide takes the students for a short break during which time they are to go to the rest room, get water and play either outside or inside if the weather is bad. Following the break the students return to their seats to continue silent reading and receive instructions by group for the written assignments that correspond to their basal work. The teacher calls students by groups to the carpet for reading group activities which go on for the rest of the reading period. Students who are not with either teacher or aide during reading group are expected to sit in their seats and complete their written assignment. Written assignments may consist of answering questions from the basal story which have been written on the blackboard, working on phonics skills by copying work from charts hanging in the room or by doing activities on mimeographed sheets. It is expected that students listen to the teacher when she gives initial directions regarding seat work. The teacher will not answer questions while she is working with a reading group on oral activities although she will respond to interruptions when she is sitting with the reading group while they are busy with silent reading activities. When students complete their written assignments they are expected to do independent work

The primary instructional components of the reading class are spelling, giving directions for written work and small group instruction in reading. Students are given grades (N for needs improvement unsatisfactory, S for satisfactory, E for excellent) for written work and spelling work. She explains that she sets her grading scale at 100 and "if they perform above 70 they know enough to get an S or an E,"dependning on their initial skill level . On written work the teacher takes neatness into consideration as well as correctness of responses.

A typical reading class will see a student entering the 08 classroom from any one of the three doors. The majority of students come from Classroom 07 where they have been working on math. When students enter the classroom the teacher tells them to sit down and begin to head their paper. She and the aide are passing around paper and spelling books, although sometimes the teacher will ask students to pass out materials.* Students are to put their ~~headings~~ names & dates. on their paper and be prepared to listen when the teacher goes to the front of the class.

* This happened more during the fall than the spring

In the beginning of the school year most instructions regarding spelling were put on the frontblackboard. As the year progressed more and more of the instructions were conveyed through oral means alone. However the routine of spelling remained unchanged. The class worked together in spelling. Teacher and students went over the list of new words in some form of choral reading at the beginning of a unit. The words are listed in a brightly colored box on the top part of the first page of the spelling unit. Following the list of words are a collection of written excercises to reinforce the spelling rule emphasized in the unit. Teacher and students together go over the directions for these assignments - doing one assignment at a time. The teacher will ask for individual or choral responses to the questions or blank sentence spaces in the assignment. Her choice of choral or individual response patterns seemed to depend on the complexity of of the lesson, but more often was somewhat random a choice.*

* often students answer individually teacher will amplify a correct response. She may make a face at/a student gives an incorrect response. Following an incorrect responses she may ask another child for the answer or rephrase the question to the original respondent. Teacher makes use of phonics "context cues frequently (rhymes will" means —

After an assignment had been gone over by the whole class students were expected to complete the same assignment individually in written form on the paper they had headed. Teacher would give them time to work on the assignment and then go around to check work. Students at the front table were given help in beginning and completeing this work by the Title 1 aide who was very similay to the teacher in style of instruction, correction and feedback.

As the teacher walked around she would straighten students' desks,

(Class profile, Teacher 08, page seven)

As the teacher walked around she would straighten students' desks, papers, and seating or writing position. She had her grading pencil out and would indicate by a check if a student completed an assignment correctly. However when a student got something wrong she would sternly point out the problem to the student. Students would need to write their assignment again if they had neglected to skip lines in the appropriate way outlined earlier by the teacher. When they had written an answer wrong they were tp erase the answer and write the correct one on the space left. Teacher would not usually give the correct answer but would be very exasperated if the student got the answer wrong a second time. Her comments when a student got a wrong answer would emphasize that the student had not listened to the oral activity.

Spelling units are done on a weekly basis. The above description reflects an early week activity. Students are expected to stu dy their words in preparation for a practice test on Wednesday. Students who do well on the practice test (i.e. make an E) are allowed to play with puzzles during the regular Friday test. During the Wednesday spelling period students are given some time to study their words and then are given the spelling test, with the teacher walking around, book in hand, reading spelling wordsa and giving them in a sentence. Students pass in their spelling papers and are expected to do independent work while teacher grades the tests and hands them back with praise or critical comments. By the end of the spelling period it is clear which students did well and which did not. Those who made S'es on the practice test are to copy their words over three times. those who make n"s copy their words till the spelling period is ended.

Spelling seemed to be a highly stressful period, especially during the work days when students are apt to be criticized for doinng their wrirten assignment inappropriately. Often the speller i is misleading. A student must rely on memory to ensure that he or she do the written work in accordance with the oral answers. If he or she gets something wrong, he or she must be a careful

eraser so as not to further incure teacher criticism by having a messy paper. Furthermore it is often difficult to figure out what to do upon being told that one's answer is wrong. Teacher feedback is not sifficient to enable one to immediately put down the right answer. She will explain that something is not right and give sometimes vague clues on how to fix answer. Her method of cuing for correcting is general, rather than reflective of an individual student's learning style. Often she will tell a student that he or she has a wrong answer and rather than helping the student figure out the problem she will harangue the student for being absent too much (Frank M.,,), for not listening or for fooling around. When the aide is free she will also go around checking work.

Following spelling the teacher begins to pick up papers which are correct and have been graded and to pass out readers. Students follow spelling with a short time doing "silent reading". During this activity students are expected to be reading over stories they have previously studied. Although the teacher often reminds students that silent reading means "Mouths closed" many students sub-vocalize (sometimes rather loudly) during this activity. Silent reading continues until break and for a brief period of time after break, during which the aide is in the room waiting for the teacher to return from the lounge.

The break is a short time when the teacher gets a chance to leave the classrooms and the students get a chance to get water or go to the restroom.* On nice days students are allowed to play for a few minutes on the playground. In bad weather, students may return to the classroom to play an aide directed game or to do escercises on the rug in time to excercise music played on the recond player.

*Students are given instructions by teacher on how to leave materials & are called to line up by sex or by reading group

When the teacher returns from her break small group reading instruction begins. Students are given seat work to do while reading groups are called to the rug by the teacher. During reading time the aide often is walking around being available to students having questions. She is likely to be at the teac her's desk grading papers or reading with her small group if time permits.

(Class profile, Teacher 08 page nine)

For small group instruction the teacher will call a reading group to the back of the room to sit on the rug. Usually the teacher sits in a chair and the students are expected to sit Indian style on the rug with their books in their laps. Reading group usually entails students reading aloud individually. Teacher will usually help a student who stumbles on a word by giving them the word Students who are not having a turn are expected to keep up with the text by keeping their finger under the sentence being read. The teacher calls on students randomly to read. She has explained that if a student will get a zero if he does not know the place when he is called on to read. During individual reading the teacher may stop on occassion to ask students comprehension questions based on the story. These questions come from the teacher's guide which the teacher uses when doing small group instruction. * Teacher asks questions at the end of a page, not at the end of an idea or a reading turn

The focus for small group instruction seems to be on ensuring that students get a chance to read aloud. At times the teache will leave the group during a student reading and call a correction from across the room. Students are expected to have studied the story so as to read smoother. Teacher does not give very much individual feedback either of a positive or negative nature during the reading aloud. However she will comment on the performance of the group as a whole following the activity- either complimenting the group on reading and moving quickly or chastising the group for not studying. Typical comments include "You all did a good job reading the story" or "I'm really ashamed of how you did"(see Dec-Jan, notes Observation 2).

During small group instruction time students at their seats are doing a variety of skill reinforcement activities as outlined at the beginning of the class period. When they have complete their work they are expected to work on folder sheets or on Durrell Murphy material which they pick up from the side counter. At times a line will form in front of the Durrell-Murphy kit. There is a rule that only two people may be up there at a time and on occasion this rule is firmly enforced. During such

times a game will ensue between students who sit on the edge of their seats ready to jump up and beat someone else into the line when an opening becomes available.

The end of the period trails off at 11:00. There is not a formal closing of class. Students again line up to return to homerooms although some are instructed to stay to finish work.

On the whole the reading class is a very businesslike time, during which a specific quantity of work is accomplished. It is not immediately apparent to observers what specific skills are being taught at any one particular time to any one particular group. There is a heavy emphasis on drill work, on studying spelling words and on practising reading. The teacher creates an atmosphere which is somewhat formal and considerably demanding of student conformance to teacher rules. Teacher does slightly change her style and expectations on special days. For instance she encouraged good work on Valentine's day by giving out small candy hearts for completed work. When she feels a student is having a bad day because of problems brought from home she will give more attention and be more prone to smile or say "good" when they have done something well. Her praise is very meagre. Students do not seem to be working for praise, although they appear proud of accomplishments such as good grades on spelling tests. The teacher makes it clear that students are responsible for their performance - that it is their fault for not listening or studying when they get things wrong (rather than taking a position that a student didn't understand or that the teacher didn't make sometning clear). There appears to be low trust of students - they are accused of cheating or not trying very frequently. The teacher prefers some students over others (notably likes Chris A and dislikes Chris T) and tends to ignore those students who do their work and get by (Brooke).

Ethnographer's comments:

This teacher stands out as an especially punitive and anxious individual who may do more harm than good in the classrooms. She tends not to be personal with her students - is cold, aloof and critical of them. Her interactions in the social realm with students are almost nonexistant. When interacting on academic basis she does not seem sensitive to students having individual styles of learning and understanding. Although she expresses interest in teaching low ability students she makes no attempt to be individualized in helping these students learn how to learn. Her prompting techniques are very narrow and she does not give differential prompts based on the type of student or type of mistake made. Her teaching style reflects very traditional teaching - she appears to teach as she was taught in grade school. There are no innovative techniques or materials visible in her instructional day.

Her firmness may reflect a clear dislike of her job and of her students. She is ready to jump on any student for any little indiscretion. She rarely appears pleased with anything and only appears calm when ordering a hamburger from the aide who comes in to take orders.

Salient categories which differentiate this teacher from the ideal or normal teacher include;

| | |
|---|---|
| amount of inner tension | high |
| ability to use miscue analysis | low |
| innovation | low |
| flexibility | low |
| pleasantness | low |
| concern with neatness and order | high |
| liking of students | low |
| efficiency | high |
| use of punishment | high |
| supportiveness | low |
| trust of students | low |
| noise level | low |
| learning in classroom | low |

Appendix B

CLINICAL DESCRIPTION T 02
Ethnographer 03

T 02's classroom was a corner room in a complex of four rooms devoted to the second grade. She had the most awkward size room. the room being more the shape of a triangle than anything close to a square. As the student load in the room was around 22 student, the room was used to capacity. The teacher continually expressed frustration with the shape of the room and her inablility to find an order to the room that allowed her and the students freedom of movement or easy organization. She changed the structure of the room at least 3 times after Christmas, trying the traditional rows of desks facing front, desks grouped in twos, and tables created by putting 6 or 8 desks together. This last format was the one that best seemed to suit her needs. Organization of the classroom was important to organization of the class as this was a weak point to the teacher. I felt her attempts to re-organize the classroom indicative of individual attempts to reorder the pattern of activities.

The blackboard was on the hypotenus of the triangle room, with coat racks on one of the other sides, and buliten boards on another. The room always had a calander board indicating things like birthdays and important events. The walls were also decorated with signs of the most recent holidays--Christmas, etc. and art work of the children in the home room. Later in th observation the Teacher began to use large paper pads or large posters with assignments written on them so that the students would have easy reminders of what they were to do. These also were posted on the wall or leaning against a wall on a table. The teacher said that she decided to use the posters/pads so that she would not have to waste time writing assignments on the board. While she probably was influenced in this idea by T 01, who had a room next to her, these did not represent individualized contracts but assignment geared to whole reading groups. The room also had a reading table to one side, and bookcases with Basel readers, spelling books, and extra reading. There were sinks and cupboards on the sides of the blackboard. At the later part of the year, the Teacher's desk faced the side of the class with the desks forming long tables perpendicular to the blackboard. There were tow entrances to the classroom, one on either side of the blackboard wall.

The tone of the class was almost always noisy. I seldom recorded a noise level below 3 and then only when the class was actively writing something. The teacher dealt with the students primarily on a one to one basis, which tended to allow the other students to do what they wanted while she was dealing with one student. The teacher seemed honestly interested in the students and treated them as people more than as 'inferiors'. In other words, it is possible there was some question for her as to what her teacher role consisted of in relation to the students. I hope to get back to this point. The teacher was consistent in the tone of voice used with the students, which was generally pleasnat if a bit pleading on occasion. She often elaborated her comments with personal anecdotes and allowed the students to do the same. If anything this contributed to the lack of time to cover necessary subject ground. The Teacher did seem concerned for students who were having problems and gave them much leaway.

There were two reading groups in the reading class--the R2D2's (Dr ons) and the Sandpeople (Longhorns). R2D2's were the lower of the two, but both were second grade level. There seemed to be a predominance of boys in the

class, though this could be an impression furthered by the fact that the boys in the class were especially disruptive. The teacher, however does not mark a lot of them as disruptive in her profile, so that causes me to think that one of us (she or I) has a different idea about disruptiveness. Generally, they appeared to make consistent attempts to distract class activities, attempts which were usually successful, and which the T often didn't even seem to notice, or would blame herself for as not having adquately prepared. The R2D2 group in particular has only 3 girls to 7 boys and was the group that presented particular problems to the Teacher, not only because they were the lower group (though some of them were good readers) but also because they had particular problem children in the group. Notably Greg (who I didn't see as as bad as some others, though the teacher did), Jodie (who didn't seem to have much of a social awareness but was very interested in getting attention, and manipulated, and was manipulated by the teacher via this point. Jodie was very strange, hard to keep on task, and almost determined to distract you from the questions during the student interviews. But he does have a sense of humor, and is intelligent), also Mark (a follower more than anything, but would follow the troublemakers who in this class could be any number of people), Justin (probably the most compulsive worker, likes to learn, but falling under the influence of the 'crowd'), Chris and David (they may look sweet..and the T says that they are, but they are as involved in carrying on as much as anybody else, especially Chris). The teacher has further problems with this group because many of them are in title I and she has to wait for them to come back to class before she can work with the group which often means that they don't get enough time.

The Sandpeople group is easier to work with, they don't resist the Teacher as much . At the beginning of the observations Arthur was a bit of a problem but one that acted alone so that the teacher could use group pressure, or pointing out Arthur's behavior as an example to the rest to keep hime from interfering as much as the group antics of the R2D2 group do to that group. The Teacher reported that she and Arthur's parents and Jennine [redacted] used some kind of behavior mod program on him which appeared to work and he no longer proved a disruption, if anything changed to a good example. In one of the November observation there is (I think) a good description of some of Arthur's behaviors and T's response. Yolanda and Shelly are ideal students in this group. I feel that Shelly see herself as the Teacher-student in relation to the rest of the class and will assume the teacher's role if the teacher should be missing from the class. In one observation the T asked Shelly to move to her chair (above the others on the floor) and read the directions to the group while she went to do something ( ). Shelley automatically all but took on the teacher's personal manerisms, and got some ridicule from the other students about it. This did not appear to bother Shelley. Later in the year comment by students about the fact that the teacher called on Shelley to do everything that requires personal responsibility (i.e. taking things to the office, passing out papers) increased such that this bias on behalf of the teacher was overly evident, yet the teacher herself did not seem too aware of it, and commented that Shelley's good behavior had decreased though I could see no evidence of change. Shelley was a good student. Perhaps a fall from favor.
the only other major problem in this group was Craig who tended to drift off and this concerned the teacher. She later attempted to resolve this problem by working with him more individually and making sure that he got the directions straight in the first place.

The teacher, herself, was a medium size, persentable woman of about early thirtish, recently divorced with a couple of children. She had worked previously as a receptionist in Doctors office, and had taught some a long time ago. She was very accepting of the observations, though she said that they made her nervous. When nervous she would fill the air with reasons why things had happened (was here late because of parents night, I don't like the teacher's manual, I should have thought that out better, this is my first year teaching). If anything, she took too much responsibility for things that went wrong and was consantly appologizing for them. Given this I admire her for her courage. Her class was consistantly caotic (chaotic?) Once she had gotten used to the presence of the ethnographers she would often explain things to us out of the side of her mouth, make faces, ask us what our opinions were about things, in general consider us allies rather than threats to her. Her manner was a bit nervous and fluttery but very human. She acted like a normal person rather than a 'teacher' or authority figure. While this was i n many ways refreshing, it was was also a problem for her in that she presented herself as someone who did not know what she was doing to us and to the kids, though they, like us, responded to her as an individual. She used the same tone of voice with everyone, student and adult, and seldom raised her voice. In fact, you might call that a distinguishing characteristic. She was generally cheerful, though occasionally looked over-tired.

Activities during reading period were organized so that the teacher would have time with both reading groups, usually taking time to answer questions of individuals or talk to students between taking groups and then work with whole class at the end (either spelling or with workbooks). At the beginning of the observation period she did some reading aloud but not much. She said that she felt that students read better and enjoyed it more when they read silently. Most of the later half of the school year was spent on phonics, spelling, word skills, etc. rather than reading per se. I fact I seldom saw them read even at their desks after Feb/March. Near the end of the year much more time seemed to be taken up with spelling. It was my impression that this classroom had a particular problem with use of time and organization of activities. The narratives indicate that a great deal of time was lost in transitions from one activity to another, mostly due to lack of teacher clarity or authority in enforcing student response to new task. The teacher would tend to let the students get themselves ready which given this class took a long time. Or she would go down the list checking with each student individually to see if they were ready. I think the ideal here was to give example to the others to be ready but it didn't work that way. Between reading groups, students would come and distract her with related and unrelated questions (which she would listen too) and the same whenever a workbook or spelling assignment/test was given. The pencil sharpener probably has to be changed one a month for all the activity it sees in these transitions. (see narrative , game set up before spelling test; or narrative , pre spelling test). The students often give the impression of <u>coordinating</u> activity to distract from any real work. While this seems pretty far out of line, and is probably not conscious, they do seem to be on the same wave length about how to provide a distraction (see Justin and Marc, narrative ).

As many of the descriptive elements of the class are listed in the teacher notebook/interview categories, from here on I will try to address specific areas relevant to this teacher and her interactions with students:

T 02

areas of interest:

CONTROL OF CLASS. Basically the teacher had a hard time controling the class. If there was any significant factor influencing her ability to convey the information necessarry to cover a second grade reading program, this was it. Part of the problem was due to a difficult combination of student personalities. But part of it was the way she herself approached discipline and control. Many times [redacted] and I (and others reading narratives) were amazed that she didn't due some of what might be the simplest things to maintain attention and teacher control. Any distraction proved to be a distraction for the whole class and left her with the task of regaining momentum and attention. This is especially evident in the videotapes. The teacher herself was easily distracted, and may have subconsciously not wanted to pursue the lesson, or at least not have been very committed to teaching it, as she herself would often contribute to the distraction by dwelling on it. (see videotape 1/26. 3/2). Another problem with control appeared to be organization. The teacher viewed organization as the key to control and continuously changed the room around, tried varying the lesson plans, or the style of presentation, or her own approach to the information. She feared student boredom (or her own?) and saw that as one reason that students lost attention. In T interview 5/22 she expresses a fear that she might be gearing the lessons too low. While I feel that she did begin to resolve this problem near the end of the observations, she never spent enough time developing any one solution to see if it worked consistently. In this she was much like her students who seemed to prefer activity however distracting to concentrated effort. And like them again, she was confused about what to do to resolve what she recognized as some problem. (see rationalizations in T notebook). While she expresses a desire to be firmer with students from the beginning, she also wanted to learn how to do this in a more positive vein (positive reinforcement). As she wished students to like her (5/22) this would be consistent. She does not view herself or present herself as an authority figure.

Approaches to controling the class were primarily one to one. The T would single out the student and comment on his/her behavior for good or bad, or take them aside and deal with them, or ignore them and complain generally about how their behavior was upseting her. Relevant categories to this approach would be:

PERSONALIZING: Teacher would personalize information, making it relevant to herself or to a student. This has an advantage of making the student self concsious and posibly altering his/her behavior. It is also a guilt inducing technique. When someone misbehaves she personalizes their effect on the class, or on her. Examples of things given in spelling tests, etc. are based on her or the students personal experiences. I might characterize the relationship between teacher and student as a peer-personal one rather than a teacher-student one. Consistent with this she wishes to develop more individualized independent contract-style of working for next year. (see daily routine in T notebook)

TEACHER RELATIONSHIP TO STUDENT: the most salient point here is I think the teachers application of a mother-mode to her teacher role. ("I'm kinda like my mother. I look like my mother in these videotapes"). While this may be a bit psycholanlytic her concern for students, and her one to one style of interaction was more like that of a mother's compassion and tolerance than like a teacher. With some of the behavior problems in the class (Jody) this worked well. With others (Bobbie, Greg) it didn't. But it did appear to increase their trust of her. They were not threatened by

her. and on a one to one level interacted with her well. It is in the group that problems arise. She seems especially fond of boys (I wonder if her own children are boys) though girls would flock around her desk at the end of the class. I thought at one point that she was a marked contrast to T 01 in that she was motherly-feminine to boys, while T 01 was firm-authoritarian favoring girls.

STUDENT PROBLEMS Many of the class did have emotional or learning disabilities. see student comments. I feel that a great deal of consistant discipline would have been necessary for any teacher with this class. T 02's inexperience was no help here, and she didn't get enough support from administration. I t is possible that what the administration wanted out of this class was a kind of maintainance program.

SELF CONCEPT (TEACHER)
Well, this may be touchy. T 02's class is problematic for a number of reasons. First of all the T's own home life (i.e. recent divorce and new job) may have contributed to a high degree of insecurity, self consciousness, and scattered energy. It is undeniably difficult for a first year teacher. She is not familiar with, or is only becoming familiar with, the subject areas and the tried and true teacher handlings of students such as the old rule of being especially firm at the onset. It would appear she is applying discipline according to what she des know--motherhood, and her ideals of what a PERSON should be or do. Her interactions with students are personal, one to one, guilt manipulative, and often self conscious. She has expressed that she wants students to LIKE HER as well as to regard her as a teacher (5/22) Her rationalizations for student behaviors are equally individualistic and personal i.e. they have a bad home, emotional problems, handicaps, are immature, etc (or stubbron). She (amazingly) does not seem to be aware of group dynamics or affiliations. She singles out individuals as a means to gaind class or group attention which either has little effect (Jodie I can hear your voice talking, to a group that includes Jodie) or wastes time (Arthur has his paper ready, Shelley has her, down the line). She seem s especially concerned with boys ( what relation to husband or children) using feminine, motherly, ploys to control their behavior (the boys are the problem). I have seen her embrace or cuddle boys (Marc in ) but not girls, though this may be an accident of observation. She has gotton fairly positive response from some with this (mentioned earlier). In general, however, such an individual personal focus leaves T at the mercy of the larger group. T approach to discipline usually serves only to provide more distraction. Most of the Teacher's energies are taken up by organizing or settling people down rather than presenting material.

I view the Teacher as insecure and self conscious, but she tries.

TEACHER METHODS OF ATTENTION GETTING
directing comments to specific students
gimmicks
touching students to get their attention
calling on student who do not have their hands up (often ignoring stu-ents who do) problem boys get consistently called on
sitting silent
calls by last name "Mr. [redacted]"
lecturing on IMPORTANCE of lesson, doing work (no change in voice tone)
providing a moral lesson (people who want to be heard raise their hands)
acts out (zips up mouth)
(see narrative/elaboration 12/12 in T notebook)

T 02

STUDENT PERCEPTIONS: T doesn't pressure stu-ents, and I think they think that for the most part that they can do what they want. She lets them set their own limits which doesn't work well with the class as a whole but has some advantages for individuals. Students tend to gang up on her, which often she doesn't seem to see. At times it appears very deliberate. With Bobbie, Arthur, Justin, Jodie, or Greg as leaders.

TEACHER QUESTIONING: Teacher theoretically has students raise their hands but often calls on students at random. Or calls on students who may give her trouble, or loose attention, like Arthur or Jodie. She will usually give a student time to answer before calling on another, and then will go back to the first and humorously explain what might have been the problem for them or give them another chance. This is where personalizing provides a very non threatening context for students to explore information in. Students often shout out answers in a group. Or shout out questions to Teacher, which she will respond with how they SHOULD act i.e. raise their hands. But they consistently shout out answers. She doesn't back it up.

STUDENT GROUP AFFILIATIONS
there seemed to be some clustering of individuals with Delane, John, and sometimes Bobbie around Arthur and David, Marc, Chris, around Greg and Jodie, with some slight sntagonism between Arthur and Jodie. That would make sense as before Jodie arrived on the scene Arthur was the prime attention getter in behavior problems, and now Jodie is. That may be one reason that Arthur's behavior mod is slipping (see Teacher Interview 5/22).

TEACHER REMARKS ABOUT STUDENTS
some surprises here (for me). T said that she like Chris C, David P, and Carrissa best, and saw them all a low disrupters. I wouldn't say that, nor do I understand her liking of those particular boys. She likes Katherine Hill and Arthur least. Arthur was a surprise. dispite all the attention she gives to Shelley, T rated her average on everything, and rather Karen abouve average. I would have thought Karen below average.

TASK STRUCTURES; As I understand it, T presents information in accords with how well she understands it and has prepared it. I think you could play with this in terms of this teacher and Doyle (Task Structures and Student Roles in Classrooms) especially as clarity is a bit of a problem andgenerally risk is minimal. In fact, this may be an example of a case where the risk is too minimal to be interesting. Activities may appear meaningless to students encouraging rebellion against the structure of the lesson. (Rebellion does not occur as much to the teacher as an individual). The teacher herself, does not seem as convinced as to the relevance of the lesson as to the importance of the behavior/emotional security of the student. In other words she places personal issues first, academic issues somewhere else. (Craig [redacted] may be one major exception, but that may be due to her confusion about him as a person).

The T is very self orientated. As evidence for this I would point to her use of personal information in elaborating examples for students, personal repremands to herself for not having done a good job with something, lack of awareness of other things operating in the classroom as a whole, comments to videotapes all concerned her performance (usually as not pleased with looks or performance). All roads lead to Rome.